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ABSTRACT

The relationship between factors underlying a measure of acculturation, the Acculturation Rating Scale for Mexican Americans (ARSMA), and the 566-item Minnesota Multiphasic Personality Inventory (MMPI) was studied. The ARSMA consists of 20 questions that are scored on a 5-point Likert scale ranging from Mexican oriented (1) to Anglo oriented (5). Acculturation is an important moderator variable in surveys of the mental health of Mexican Americans. Subjects were 349 English speaking Mexican American college students and 101 Anglo American college students in Texas. Results of principal components analysis indicate that noteworthy relationships exist between some aspects of acculturation and conventional measures of psychological adjustment. Individuals who score lower on social withdrawal/intrapersonal dissatisfaction and social conformity on the ARSMA tend to score higher on the social withdrawal/intrapersonal dissatisfaction and social conformity factors of the MMPI. Results are not generalizable to the Hispanic American population as a whole because the sample consisted of English-speaking college students, most of whom were female. Three tables present study data, and there is a 14-item list of references. (SLD)

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Canonical Correlations Between Dimensions of Acculturation and Psychological Adjustment

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Abstract

The relationship between factors underlying a measure of acculturation and the Minnesota Multiphasic Personality Inventory are presented. Acculturation is an important moderator variable in surveys of the mental health of Mexican Americans. Results indicate that noteworthy relationships exist between some aspects of acculturation and conventional measures of psychological adjustment.

Canonical Correlations Between Dimensions of Acculturation and Psychological Adjustment

Introduction

Ethnic differences on standardized measures of psychological adjustment were, until recently, construed as demonstrating lower levels of personal adjustments among Blacks, or Hispanics, or Native Americans. However, effective mental health care must be based on valid psychodiagnosis through the application of accurate psychometrics. It has been argued that unbiased assessment of Hispanics and other minority groups will remain illusory if mental health providers remain insensitive to the cultural and linguistic variation of their clients (Malgady, 1987). Relatively few researchers have taken into account the fact that minority groups such as Mexican Americans are extraordinary heterogeneous in acculturation, and they reside in an ever changing socio-cultural context (Greene, 1987).

Acculturation has been a topic of considerable discussion among Mexican American and other scholars in recent years. There is little disagreement that as exposure to, and interaction in American society occurs, acculturation among persons of Mexican descent occurs. However, there is less consensus regarding

the dynamics, measurement, and effect of this process. A recent review of acculturation and mental health status among Hispanics (Rogler, Cortes, & Malgady, 1991) attempts to integrate the findings on acculturation and its impact on psychological health. One conclusion drawn by Rogler et al. (1991) is that the psychological consequences of acculturation are an important topic of study.

Various hypothesis have been proposed about the relationship between acculturation and mental health among Mexican Americans. One prediction concerning the impact of acculturation on mental health is that acculturation facilitates mental health. The reasoning for this argument is that Mexican Americans who strongly identify with the Mexican culture, and are unacculturated to the ways of the dominant culture will experience considerable psychological stress due to discrimination, and the pressure to conform to the host society's attitudes and behaviors (Berry, 1980; Fabrega, 1969). In contrast, Mexican Americans who identify more with the Anglo-American culture will experience less adjustment problems and less stress. More recently, Hispanic researchers have proposed a bicultural model of acculturation whereby bicultural identity or identification with and adoption of both

Anglo American and Mexican cultures promotes healthier adjustment in Hispanics than complete assimilation (Ramirez, 1984; Szapocznik & Kurtines, 1980).

The present investigation attempts to extend the knowledge regarding the influence of acculturation on standardized measures of psychological adjustment. The purpose of the research reported here was to examine the multivariate relationships between the factors underlying cultural change (ARSMA) and the psychological measures of adjustment (MMPI scales). Specifically, the following questions were posed:

1. What are the factors underlying the measure of acculturation (ARSMA).
2. What are the factors underlying the measure of psychological adjustment (MMPI).
3. What are the canonical correlations between the two sets of factors.

Methods

Subjects

Data for this research comes from a sample of Mexican American and Anglo college students in South Texas. The students were administered the Minnesota Multiphasic Personality Inventory (MMPI) along with the Acculturation Scale for Mexican Americans (ARSMA) developed by Cuellar, Harris and Jasso (1980). Data

were obtained from students enrolled in freshman-level general elective courses at a university in southern Texas. Of the 450 subjects in the MMPI study, 349 (232 females, 117 males) were Mexican American, according to surname and self-report.

Instrumentation

The Acculturation Rating Scale for Mexican Americans (ARSMA) (Cuellar, Harris, & Jasso, 1980) consists of 20 questions to be scored on a 5-point Likert scale ranging from Mexican oriented (1) to Anglo-oriented (5). Questions were designed to measure preference and behavioral tendencies or actual behavior. Questions for the scale were selected to reflect five dimensions considered significant in the measurement of acculturation. These dimensions are: (a) language familiarity and usage, (b) ethnic pride and generation, (c) reading, writing, and cultural exposure, and (d) ethnic interaction.

The Minnesota Multiphasic Personality Inventory (MMPI), is currently the most employed standardized test of psychological adjustment. The inventory is self-administered and consists of 566 questions or statements requiring either a true or false endorsement. The instrument consists of 3 validity scales and 10 clinical scales. The MMPI was designed

to quantify the severity of psychopathology and psychological distress in adults. In previous research when the 13 validity and standard scale scores were factor analyzed, typically four factors emerged: (1) Anxiety, (2) Repression, (3) Male-Female Role, and (4) Social Introversion (Graham, 1987).

Procedures

An adult, male researcher entered each class and asked for volunteers. In a few cases, instructors offered a limited amount of extra credit toward course grades for student participation but for approximately 30% of the subjects, participation was strictly voluntary. The purpose of the study was said to gain information and an understanding of acculturation and personality processes. The 20 item ARSMA (Cuellar et al., 1980) and the MMPI was given to each student who volunteered to participate.

Results

Based on Kaiser's minimum eigenvalue criterion, the principal components analysis with varimax rotation yielded a five factor solution for the 20 items of the ARSMA which accounted for 60.18% of the variance. The resulting factor structure is presented in Table 1, along with the eigenvalues prior to rotation (Thompson, 1989) and the trace distribution

after rotation. An examination of the individual items and the resulting factor matrix pattern suggest the factors can be characterized as follows: (a) Language Preference, (b) Cultural Contact, (c) Ethnic Identity, (d) Ethnic Pride, and (e) Ethnic Interaction.

Insert Table 1 about here.

A four-factor solution resulted from the principal components analysis of the three validity and ten clinical scales of the MMPI, accounting for 68.89% of the variance. Table 2 contains the resulting factor structure, eigenvalues prior to rotation and the distribution of the trace after rotation. The four dimensions of the resulting rotated factor pattern were classified as follows: (a) General Psychological Adjustment, (b) Social Conformity, (c) Social Withdrawal/Intrapersonal Dissatisfaction, and (d) Role Conformity.

Insert Table 2 about here.

Results of the multivariate canonical correlation analysis yielded one significant factor with a

canonical correlation R_c=0.2168, accounting for approximately 5% of the variance (Wilk's Lambda = 0.906, F = 1.705, df = 20, p < .02). It should be noted that the sample consists of a very homogeneous group of bilingual college level Mexican Americans, the majority of whom are female. Thus, attenuation of the resulting canonical correlation coefficient is highly likely given the restriction of range of the acculturation scores (Allen & Yen, 1979). The standardized function coefficients and structure coefficients for the five factors of the ARSMA and the four factors of the MMPI are presented in Table 3. The standardized function coefficients are the weights used to calculate the resulting canonical function and provide an indication of the relative contribution of each predictor variable (Thompson, 1984). The structure coefficient is simply the correlation between an original predictor variable and the resulting canonical variate which provides measure of the degree similarity between these two values (Friedrich, 1991).

Insert Table 3 about here.

An examination of these values suggests the existence of a predominant relationship between the MMPI factors reflecting Social Withdrawal/Intrapersonal Dissatisfaction and Social Conformity and the ARSMA items corresponding to the Language Preference, Cultural Contact, and Ethnic Interaction Factors. This relationship indicates that those individuals who score lower on these factors on the AMSRA tend score higher on the Social Withdrawal/Intrapersonal Dissatisfaction and Social Conformity factors of the MMPI.

Educational and Scientific Importance

Acculturation has been considered an important moderator variable in surveys of the psychological and physical health of Hispanics. The present study isolated several dimensions of acculturation, and also indicates that a small but noteworthy relationship exists between some aspects of acculturation and conventional measures of psychological adjustment. The results suggest that counselors must be cautious when using psychological measures with diverse ethnic populations.

The difficulty is that scores on psychological measures will vary not as the sole function of being under some psychological stress, but may also vary

within the ethnic group as a function of varying levels of acculturation.

The present study attempts to advance our understanding of the impact of cultural change on psychological processes, psychological health and adjustment. The present findings should not be generalized to the Hispanic population since the sample consists of bilingual college level Mexican Americans with a majority of the sample being female.

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Table 1

Factor Structure for ARSMA

	Language Preference	Cultural Contact	Ethnic Identity	Ethnic Pride	Ethnic Interaction	h^2
A10	0.7709	0.2485	0.0261	0.0301	0.0443	0.6595
A9	0.7556	-0.0237	0.1245	0.1235	0.0943	0.6111
A11	0.7287	0.2332	0.0439	0.0097	0.0292	0.5883
A2	0.7269	0.1002	0.1670	0.1627	0.1204	0.6073
A16	0.7227	0.2700	0.0889	0.2114	0.1491	0.6670
A1	0.6793	0.1024	0.2322	0.1805	0.1371	0.5771
A13	0.1024	0.7990	0.2639	0.0245	0.5643	0.7223
A18	0.2751	0.7732	0.0500	0.2236	0.0979	0.7356
A17	0.3654	0.7022	0.0727	0.1424	0.1024	0.6627
A4	0.1530	0.0697	0.8323	0.0857	0.0702	0.7333
A5	0.1288	-0.0934	0.7181	0.3129	0.0728	0.6441
A14	0.1212	0.4124	0.4976	0.0195	0.0045	0.4328
A3	-0.0294	0.2725	0.4622	0.4525	0.1792	0.5255
A19	0.1678	-0.0580	0.0539	0.7421	0.0186	0.5854
A15	0.1220	0.1660	0.1105	0.5691	0.1337	0.3963
A20	0.2933	0.3139	0.1167	0.5373	0.1619	0.5130
A7	0.1434	0.0756	0.1138	0.0018	0.8213	0.7137
A6	0.3226	0.0985	0.1853	0.0565	0.6691	0.5990
A8	-0.0185	0.0447	-0.0664	0.3114	0.6287	0.4989
Prerotation Eigenvalues	6.2941	1.8637	1.4971	1.3212	1.0590	
Postrotation Trace	3.7664	2.4206	2.3833	1.7675	1.6974	12.0332

Table 2

Factor Structure for MMPI

	General Psy. Adjustment	Social Conformity	Social Withdrawal	Role Conformity	h^2
SC	0.8227	-0.2065	0.1588	0.2227	0.7943
PT	0.7545	-0.0922	0.3430	0.0653	0.6994
HS	0.7222	0.3923	0.0570	0.0512	0.6814
PD	0.7050	0.0396	-0.0736	-0.0749	0.5095
PA	0.6851	-0.2261	0.0279	-0.0448	0.5233
F	0.6607	-0.3246	0.1790	0.3172	0.6746
HY	0.6463	0.4892	0.0720	-0.1679	0.6904
K	-0.0464	0.8239	-0.2099	-0.1649	0.7522
L	-0.0826	0.6295	0.1441	0.3213	0.5270
SI	0.1838	-0.3048	0.8158	0.0336	0.7933
D	0.5297	0.1920	0.6914	-0.0228	0.7959
MA	0.3863	-0.4299	-0.5907	0.2126	0.7282
MF	0.0457	0.0223	-0.0676	0.8802	0.7818
Prerotation Eigenvalues	4.4003	2.0268	1.4875	1.0368	
Postrotation Trace	4.0630	1.9925	1.7513	1.4459	9.2527

Table 3

Factor	Standardized Function Coefficient	Structure Coefficient
Language Preference	-0.4365	-0.4365
Cultural Contact	-0.7073	-0.7073
Ethnic Identity	-0.2642	-0.2642
Ethnic Pride	0.0511	0.0511
Ethnic Interaction	-0.4865	-0.4865
General Psy Adjustment	0.4089	0.4089
Social Conformity	0.5958	0.5958
Social Withdrawal	0.6357	0.6357
Role Conformity	0.2716	0.2716

Note: The function and structure coefficients for this analysis are equivalent as the resulting factors generated from the factor analysis for each instruments are uncorrelated.